

Quick-Threading Lock Nuts

The Problem

When you tighten a standard lock nut around the thread on a long rod, you have to twist your hand, wrist, and forearm over and over. Making these twisting movements can strain the muscles and tendons in your hand, wrist, and elbow. The strain can become more serious if you do this work a lot and you repeat the same movements for a long period of time. You can eventually develop pain and even a serious injury.

Your chance of injury depends on the amount of finger pressure you use to hold the nut, the distance the nut is threaded, and the number of nuts threaded. Working in positions where you have to reach above your shoulders to thread the nut increases your chance of injury.

Problem: Tightening conventional nut on all-thread



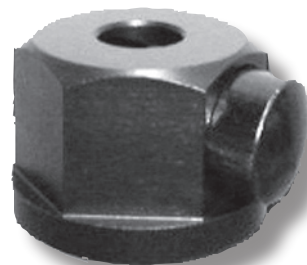
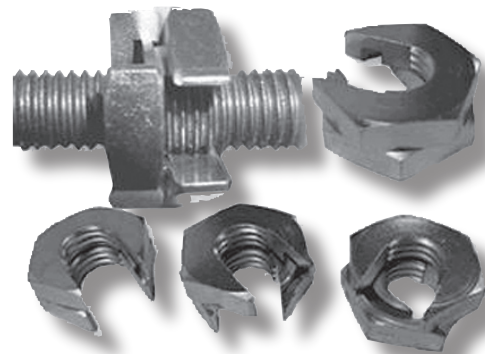
*Solution: Two piece slip-on lock nut (top)
and button lock nut (bottom)*

One Solution

Use a **quick-threading lock nut**. Depending on the type of nut, these can either snap onto an all-thread rod at any position, or slide up and down the rod freely. They eliminate the repeated hand, wrist, forearm, and elbow twisting. They can also reduce the time you spend working above your shoulders because they go on faster.

How It Works

There are two types of quick-threading lock nuts—two piece lock nuts and button lock nuts.



When using the two piece lock nut, you twist the two sections of the nut apart until the slot is open, then place the nut on the all-thread rod where you need it. Then twist the two sections together again until the slot is closed and the sections are snug against each other. Finally, tighten the nut with a wrench until the openings on the two sections face in opposite directions.

When using the button lock nut, you first push the button to loosen the nut from the thread. Then slide the nut to the spot you want. Let go of the button to make the nut re-connect with the thread. Then tighten it as you would any nut.

Benefits for the Worker and Employer

Using quick-threading lock nuts should reduce the strain on your hand, wrist, and forearm. It should therefore lessen the chance of pain and musculoskeletal injury. Because you spend less time working above your shoulders, there is also less overall strain on your shoulders, neck, and back during a shift.

In addition, these nuts should lead to a gain in productivity because they take less time. They make certain kinds of work much easier, such as threading nuts in locations that are difficult to access. Quick-threading lock nuts may not be appropriate for all jobs, and their use may require the approval of the building owner, architect, engineer, or general contractor.

Approximate Cost

The two piece lock nuts start at \$2–3 each, depending on diameter. Metric sizes are available. The button lock nuts start at approximately \$6 each.

For More Information

- Products related to this solution are described at www.cpwr.com/simple.html.
- Local contractor tool and equipment suppliers or rental companies may be another source of information on products.
- For general information on this solution, check www.cpwrconstructionsolutions.org and www.elcosh.org.